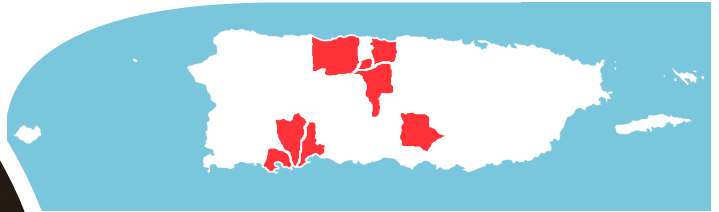


Puerto Rican Crested Toad

Peltophryne lemur



Distribution 



Family: Bufonidae
Order: Anura

Description

The adult Puerto Rican crested toad is medium-sized, reaching a length of between 2.5 to 4.5 inches (6 – 11 centimeters). The coloring in adult individuals varies from yellowish green to blackish brown on the dorsal area, and creamy white on the ventral area. Its skin has a pebbled texture. The species has a snout which curves upwards. Their eyes are like beautiful marbled gold colored crystals. These toads have crests above their eyes, hence its common name, and it is this feature which sets it apart from other toad species. Males are smaller than the females, and their crests are not as prominent. The juveniles (less than an inch [2.5 centimeters] long) present a coloration pattern very different from the adult specimens. The pattern features light-colored splotches on the sides, and two darker, triangular-shaped spots on their backs, shaped like an hourglass.

Biological Information

Reproduction

In nature, the crested toad only reproduces in temporary pools which are formed when there is more than 4 inches (10 centimeters) of precipitation. Once the adults reach the pools, the males vocalize (croak) in order to attract females. The males will climb onto the female, forming an “amplexus” (embrace) to fertilize the strand of eggs as the females lay them. They both swim around the pool, so that the egg strand can become attached to the vegetation in the pool. Egg strands can contain up to 15,000 eggs, and will hatch into tadpoles within 24 hours of being laid. After 18 days, the tadpoles transform (metamorphosis) into tiny toads. Once they climb out of the pool, the tiny toads migrate towards limestone areas within the forest to find protection.

Although there is a high percentage of egg survival, the eggs face many threats such as: predators, changes in temperature and salinity, and pool drying out before the eggs hatch or the tadpoles can metamorphose into juvenile toads. It is also worth mentioning that crested toads, like many other toad species, do not provide parental care to assure the survival of their offspring during the vulnerable early stages of life. For these reasons, although many eggs, tadpoles and juveniles occur, only an approximate 1% reaches adulthood.

Habitat

The habitat in which the Puerto Rican crested toad is found is usually described as a coastal dry forest, although they can also be found in subtropical, humid forest habitats, mainly along the karst fringes along the north and south coasts of Puerto Rico. The crested

THREATENED

toad hides in limestone cavities and holes. The species also uses the nest cavities made by Puerto Rican todies – usually in earthen walls or embankments – and underground spider lairs and crab burrows. This discrete behavior makes detecting the species difficult in surveys, which hinders population calculations. Recently, the crested toad population is calculated by counting the individuals (males as well as females) observed during a reproductive event. Due to this, crested toad population numbers may vary depending on the intensity of the event observed.

Diet

The crested toad is a predator. It feeds on insects like crickets, roaches and centipedes, among others.

Distribution

The Puerto Rican crested toad is a species endemic to Puerto Rico and Virgen Gorda (British Virgin Islands). Information found in the species' historical collection in Puerto Rico suggests that the species had a wider distribution throughout the karst fringes in the north and south coasts of Puerto Rico than the present distribution. The crested toad can be found from the sea level, going up to an elevation of 650 feet (200 meters) above sea level. The species had been described in 1868 in the municipalities of Bayamón, Morovis, Vega Baja, Barceloneta, Arecibo, Isabela, Quebradillas, Camuy, Santa Isabel, Coamo, Ponce, Guayanilla, and Yauco. Presently, only three (3) naturally-occurring populations have been located in the southern coast of Puerto Rico, between the municipalities of Guayanilla, Yauco and Guánica. The biggest known population is found in Guánica Commonwealth Forest. In Santa Isabel, the species

was last seen in 1972. In the northern coast of Puerto Rico, especially in the municipalities of Isabela and Quebradillas, the species has not been seen since 1992, despite efforts made to locate them. In Virgen Gorda, the species is believed to be extinct.

Threats

The main factors contributing to the Puerto Rican crested toad's diminishing populations are the following:

- Loss of habitat due to modification, fragmentation, deforestation and pool (pond) elimination due to tourism, urban and agricultural development.
- The introduction of exotic species, and native species, which compete with or predate on the Puerto Rican crested toad. Some of these are the cane toad (*Rhinella marina*), the bullfrog (*Rana catesbeiana*), as well as dragonfly larvae (naiads).

Conservation Measures

The Puerto Rican crested toad was included in the federal endangered species list in 1987. Since 1993, species recovery efforts have been jointly coordinated between the U.S. Fish and Wildlife Service, the Puerto Rico Department of Natural and Environmental Resources, the Association of Zoos and Aquariums (AZA), and other entities belonging to the Puerto Rican Crested Toad Task Force. The U.S. Fish and Wildlife has been promoting the improvement and preservation of the habitats located in private land. The Department of Natural and Environmental Resources has been managing the properties under its jurisdiction, so as to preserve and protect the species. The Association of Zoos and Aquariums



THREATENED

has established a captive breeding program for the species, in which 31 national zoos and two Canadian zoos collaborate. Thanks to these combined efforts, thousands of tadpoles are released every year in six protected areas in Puerto Rico. This helps promote the establishment of new populations and the expansion of the range for the species. At the moment, the species is being reintroduced in the following north coast properties: La Esperanza, in Manatí; Río Encantado, between Ciales-Florida; and El Tallonal, in Arecibo. In the southern coast, the following properties are hosting similar reintroductions: El Convento, in Guayanilla; Finca Gabia, in Coamo; and Manglillo Grande, located within Guánica Commonwealth Forest.

The Endangered Species Act of 1973, as amended, prohibits the killing, harassing, trapping, purchasing or selling any species, as well as parts and products derived from the species.

Additional Facts

The common name ‘Puerto Rican crested toad’ was originally given to *Peltophryne lemur*. With the species’ decline in Puerto Rico, the name extended to include the introduced cane toad (*Rhinella marina*), which is less crested and larger than *Peltophryne lemur*. The exotic species’ populations grew so much it has become the most common toad in Puerto Rico. This now-common toad was introduced to Puerto Rico in the 1920s as biological control for the white worm which plagued the sugar-cane fields.

Some Recommended Practices

If you see a Puerto Rican crested toad in any other areas not described in this fact sheet, please notify the appropriate agency. You can call the Caribbean Ecological Services Field Office, at 787-851-7297.

References

García-Díaz, J. 1967. Rediscovery of *Bufo lemur* (Cope) and additional records of reptiles from Puerto Rico. *Stahlia* 10:1-6

U.S. Fish and Wildlife Service. 1992. Recovery plan for the Puerto Rican crested toad (*Peltophryne lemur*). U.S. Fish and Wildlife Service, Atlanta, Georgia. 19 pp.

U.S. Fish and Wildlife Service. 2014. Draft- Five Year Status Review of the Puerto Rican Crested Toad (*Peltophryne lemur*).

U.S. Fish and Wildlife Service, Caribbean Ecological Service Boquerón Field Office, Puerto Rico. 48 pp.

Additional Information

Caribbean Ecological Services Field Office
Address: PO Box 491, Boquerón, PR 00622
Telephone: 787-851-7297
Fax: 787-851-7440
Internet: www.fws.gov/caribbean



THREATENED